

PATENT

1130/SYMBP102US

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[Signature]  
Himanshu S. Amin

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of:

Applicants(s): Michael Slutsky, *et al.*

Serial No: 10/034,072

Filing Date: December 28, 2001

Examiner: Ahshik Kim

Art Unit: 2876

Title: LIGHTHOUSE ASIC

**Mail Stop Appeal Brief – Patents**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, VA 22313-1450**

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**APPEAL BRIEF**

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Dear Sir:

Applicants' representative respectfully submits this brief in connection with an appeal of the above-identified patent application. A credit card payment form is filed concurrently herewith in connection with all fees due regarding this appeal brief. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [SYMBP102US].

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**I. Real Party in Interest (37 C.F.R. §41.37(c)(1)(i))**

The real party in interest in the present appeal is SYMBOL TECHNOLOGIES, INC., the assignee of the present application.

**II. Related Appeals and Interferences (37 C.F.R. §41.37(c)(1)(ii))**

Appellants, appellants' legal representative, and/or the assignee of the present application are not aware of any appeals or interferences which may be related to, will directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. Status of Claims (37 C.F.R. §41.37(c)(1)(iii))**

Claims 12-20 have been withdrawn. Claims 1-11 stand rejected by the Examiner. The rejection of claims 1-11 is being appealed.

**IV. Status of Amendments (37 C.F.R. §41.37(c)(1)(iv))**

Subsequent to the final rejection dated September 22, 2004, the status of claim 1 was amended to "Original" to reflect that no claim amendments had been made to claim 1 from the claim as originally submitted in the application. The reply to Office Action dated April 4, 2004 had incorrectly listed claim 1 as "Currently Amended", although it was not amended. The amendment to the status of claim 1 has been entered.

**V. Summary of Claimed Subject Matter (37 C.F.R. §41.37(c)(1)(v))****A. Independent Claim 1**

Independent claim 1 recites a portable electronic device comprising: an imager coupled to the portable electronic device; a laser scanner coupled to the portable electronic device; and an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner. (*See e.g.*, page 4, line 19-page 5, line 10)

**B. Claim 2**

Claim 2 recites the portable electronic device of claim 1, further comprising a data blender adapted to receive data from multiple sources and distribute the data to multiple destinations based on a type or content of the data. (*See e.g.*, page 5, lines 10-20)

**C. Claim 10**

Claim 10 recites the ASIC of claim 4, the modular memory IDE interface function including a NAND memory function. (*See e.g.*, page 20, line 24-page21, line 20)

**D. Claim 11**

Claim 11 recites the ASIC of claim 4, the modular memory IDE interface function including a CF card function. (*See e.g.*, page 20, line 24-page21, line 20)

**VI. Grounds of Rejection to be Reviewed (37 C.F.R. §41.37(c)(1)(vi))**

A. Whether claims 1 and 3-9 are patentable under 35 U.S.C. §102(b) over Kunert, *et al.* (US 6,109,528).

B. Whether claim 2 is patentable under 35 U.S.C. §103(a) over Kunert, *et al.* (US 6,109,528) in view of Lieb, *et al.* (US 5,875,415).

C. Whether claims 10-11 are patentable under 35 U.S.C. §103(a) over Kunert, *et al.* (US 6,109,528) in view of Meier, *et al.* (US 6, 561,428).

**VII. Argument (37 C.F.R. §41.37(c)(1)(vii))****A. Rejection of Claims 1 and 3-9 Under 35 U.S.C. §102(b)**

Claims 1 and 3-9 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kunert, *et al.* (US 6,109,528). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Kunert, *et al.* does not teach or suggest each and every limitation of applicants' claimed invention.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that "each and every element as set forth in the claim is found, either expressly or

inherently described, in a single prior art reference.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (*quoting Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

The subject invention relates to a portable electronic device that can be coupled to multiple additional devices and also containing an ASIC that can communicate with the coupled devices. In particular, independent claim 1 recites *an imager coupled to the portable electronic device* and *a laser scanner coupled to the portable electronic device*. These are two separate and distinct data capture devices coupled to the portable electronic device. The imager is an image capture device, such as a charged couple device (CCD) photosensor array imaging device. The laser scanner includes its own laser output and image sensor. Furthermore, the subject claim recites *an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner*. Refer to Figure 1 and to page 4, lines 19-23 of the specification which states “Fig. 1 is a high-level schematic illustration of a portable bar code reading terminal 5 employing an ASIC 10 having circuitry 12 for carrying N number of functions (N being an integer). The terminal is coupled to M number of devices 13 (M being an integer), such as *an imager, a laser scanner, a fingerprint reader, etc.*” Also refer to page 6, lines 4-9 of the specification which states “Furthermore, in conventional systems, two completely different sets of hardware and software were used to route *data from an imager* and *data from a scanner* to a system. According to an aspect of the present invention, the ASIC 10 *interfaces with both an imager and a scanner* and routes the *data from the two devices* to the bar code reading terminal 5.” These sections of the specification and drawings clearly support the subject claim’s recitation of two separate data capture devices, an imager and a laser scanner coupled to the terminal, each providing separate data captured from each device to the ASIC.

Contrary to the Examiner’s assertions, Kunert, *et al.* does not teach this aspect of the subject claim. Rather, Kunert, *et al.* describes a single image capture device, a laser scanning assembly. The Office Action argues that Kunert, *et al.* teaches an ASIC connected to a laser and a photo diode, suggesting that the ASIC handles communications to the laser and photo diode. It is arguable whether the laser scanning assembly of Kunert, *et al.* has a separate ASIC for driving the laser beam and a separate microcontroller for decoding the reflected light sensed by the photo diode, or as asserted in the Office Action, that the ASIC communicates with both the laser and

photo diode. However, this is not pertinent to the primary argument regarding the subject invention. The subject claim clearly recites two distinct data capture devices coupled to the portable electronic device, an imager and a laser scanner. As conceded in the Advisory Action, Kunert, *et al.* discloses a laser and a photo diode (image capturing means) as part of a laser scan engine. The laser scan engine is a single image capture device, equivalent to the laser scanner of the applicants' claimed invention. Therefore, it is readily apparent that Kunert, *et al.* does not teach or suggest two data capture devices, an imager coupled to the portable electronic device and a laser scanner coupled to the portable electronic device.

In view of at least the above, it is respectfully submitted that Kunert, *et al.* does not teach or suggest applicants' claimed invention as recited in independent claim 1 (and claims 3-9 which depend there from). Accordingly, reversal of this rejection is respectfully requested.

**B. Rejection of Claim 2 Under 35 U.S.C. §103(a)**

Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kunert, *et al.* in view of Lieb, *et al.* (US 5,875,415). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Kunert, *et al.* and Lieb, *et al.*, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Lieb, *et al.* does not make up for the aforementioned deficiencies of Kunert, *et al.* with respect to independent claim 1 (which claim 2 depends from). Lieb, *et al.* is concerned with allowing

a single data acquisition device to be capable of interfacing with multiple host devices having varying interface requirements. Lieb, *et al.* teaches a universal host interface cable that is able connect a variety of data capture devices to a variety of host devices. However, the host interface cable as described only connects to one data acquisition device and one host device at a time. Lieb, *et al.* fails to disclose that the host interface cable can connect to multiple data acquisition devices simultaneously and furthermore fails to disclose that the host device is portable. Therefore, it is readily apparent that Lieb, *et al.* individually or in combination with Kunert, *et al.* fails to teach or suggest an imager coupled to the portable electronic device and a laser scanner coupled to the portable electronic device. Accordingly, reversal of this rejection is respectfully requested.

**C. Rejection of Claims 10 and 11 Under 35 U.S.C. §103(a)**

Claims 10 and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kunert, *et al.* in view of Meier, *et al.* (US 6,561,428). It is respectfully submitted that this rejection should be reversed for at least the following reasons. Kunert, *et al.* and Meier, *et al.*, alone or in combination, do not teach or suggest each and every limitation of applicants' claimed invention. Meier, *et al.* does not make up for the above noted deficiencies of Kunert, *et al.* with respect to independent claim 1 (which claims 10 and 11 indirectly depend from). Meier, *et al.* teaches a method to improve image capture as it relates to an indicia bearing substrate orientation with respect to the image capture device. The methods of Meier, *et al.* employ a single image capture device. Therefore, it is readily apparent that Meier, *et al.* individually or in combination with Kunert, *et al.* fails to teach or suggest an imager coupled to the portable electronic device and a laser scanner coupled to the portable electronic device. Accordingly, reversal of this rejection is respectfully requested.

**D. Conclusion**

For at least the above reasons, the claims currently under consideration are believed to be patentable over the cited references. Accordingly, it is respectfully requested that the rejections of claims 1-11 be reversed.

If any additional fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SYMBP102US].

Respectfully submitted,  
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**VIII. Claims Appendix (37 C.F.R. §41.37(c)(1)(viii))**

1. A portable electronic device comprising:  
an imager coupled to the portable electronic device;  
a laser scanner coupled to the portable electronic device; and  
an application specific integrated circuit (ASIC) comprising circuitry for communicating with the imager and laser scanner.
2. The portable electronic device of claim 1, further comprising a data blender adapted to receive data from multiple sources and distribute the data to multiple destinations based on a type or content of the data.
3. The portable electronic device of claim 1, the portable electronic device being a bar code reading terminal.
4. The portable electronic device of claim 1, the ASIC further comprising circuitry for carrying out at least one of the following functions:  
power management;  
wake up control and power down;  
critical suspend shutdown;  
warm boot and cold boot;  
serial port for WAN radio;  
matrix keyboard scanning;  
IP security;  
analog converters;  
touch panel;  
smart and dumb battery;  
modular memory IDE interface;  
fingerprint reader;  
USB host; and  
magnetic stripe interface.



5. The ASIC of claim 4, the smart and dumb battery function including a gas gauging function
6. The ASIC of claim 4, the smart and dumb battery function including a cycle life function.
7. The ASIC of claim 4, the smart and dumb battery function including a charge control function.
8. The ASIC of claim 4, the smart and dumb battery being a Ni-MH battery.
9. The ASIC of claim 4, the smart and dumb battery being a Li-Ion battery.
10. The ASIC of claim 4, the modular memory IDE interface function including a NAND memory function.
11. The ASIC of claim 4, the modular memory IDE interface function including a CF card function.
- 12-20 (Withdrawn)

**IX. Evidence Appendix (37 C.F.R. §41.37(c)(1)(ix))**

None.

**X. Related Proceedings Appendix (37 C.F.R. §41.37(c)(1)(x))**

None.